

BURRELL 3.0-012

TITLE: VIRTUAL KEYBOARD AND CONTROL MEANS

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FIELD OF THE INVENTION

5 This invention relates to a data entry method on split
space bar keyboards and an eight bit binary computer data code
used as an eight dot braille arrangement, method of finger
braille communication for the blind, deaf-blind, visually
impaired, cerebral palsy, speech impaired, etc. and a method
10 of producing a space, letters, numbers, data, symbols,
characters, control, fonts, graphics, etc. on an eight sensor
chordic data entry device or a split space bar keyboard.

BACKGROUND OF THE INVENTION

15 This patent application is an improvement on the
invention found in U.S. Patent #5,993,089, in which a
copyright and a patent was granted.

DESCRIPTION OF PRIOR ART

20 There are numerous well-known, prior art keyboards along
with systems and methods for inputting data into typewriters,
braille writers, word processors, phones, computers, laptops,
keyboards, touch screen input devices, PDAs, cell phones,
virtual keyboards and the like. Unfortunately, most modern
systems are inherently slow, difficult to learn, not organized

in a logical fashion and/or cumbersome for the general population, including the handicapped, visually impaired, speech impaired, motion disabled and the like. The most used prior art keyboard is the QWERTY keyboard which derives its name from the first six letters on the top row of the alphabet keys or sensors. The data entry touch typing method, invented by the blind, is the method taught to use the QWERTY keyboard. The QWERTY keyboard and QWERTY touch typing method has been around longer than any other keyboard, excluding the piano, and was originally designed to slow down typists so that manual typewriter keys would not jam. A good explanation of the history of the QWERTY keyboard is set forth in an article entitled "TYPING WITH A TWO-HAND CHORD KEYBOARD: WILL THE QWERTY BECOME OBSOLETE" by Daniel Gopher and David Raij, IEEE Transactions on Systems, Man, and Cybernetics, Volume 18, No. 4, July-August 1988, pages 601-609.

In response to the relatively slow and cumbersome QWERTY system, some new word processors and computers have moved to the improved Dvorak layout, although very few. One of the characteristics of the Dvorak keyboard is that the vowels a, o, e, u and i form the first five keys of the second alphabetic row of the keyboard. The United States Department of the Navy tested the Dvorak design and found it to produce up to a twenty percent increase in typing speeds. While improved efficiencies are possible and proven with the Dvorak keyboard, it still does have some drawbacks, the major one of

which is that the keys are not laid out in an ergonomic fashion to follow the natural ergonomic positions of the hands and fingers. Moreover, because there are more keys than the operator has digits, it is necessary for the operator to continually move his or her hands and fingers up and down or left and right to find and depress the appropriate key or keys. This tends to reduce the overall speed of the typist.

In order to increase speed, the chordic keyboard was invented. There are a number of chordic keyboards on the market, some of which have sets of linear rows, some have curved rows, some have vertical rows or some have horizontal rows . The common denominator is that it has fewer keys than the common QWERTY keyboard or the Dvorak keyboard, and that chords are employed, i.e. combinations of keys or sensors, to enter or produce specific letters, numbers, symbols, characters or functions. The fastest data entry keyboard presently used is the court stenographer's phonetic chord keyboard. There are other keyboards and devices available for attachment to personal computers and the like, in order to provide additional functions or to increase the speed of data entry.

The patent literature describes a number of efforts to improve the speed and efficiency of data entry on keyboards. For example, U.S. Patent 4,680,572 to Meguire, et al. entitled CHORD ENTRY KEYING OF DATA FIELDS describes a keyboard

arrangement, which in one embodiment, has eleven keys arranged in two sets of five, for either hand, and a common enter key located between the two hands. The system permits the entry of data in a chord-like fashion provided that the common function key is depressed during a predetermined time frame prior to or after the depression of the last data key. Efforts to arrange keyboard keys in a vertical fashion is also described in certain prior art literature. U.S. Patent 3,428,747 to Alferieff entitled MAN TO MACHINE COMMUNICATION KEYBOARD DEVICE discloses a keyboard arrangement in which the four digits and thumb of the right and left hands, respectively, are positioned adjacent to two sets of keyboards, each having five keys, that are vertical and substantially adjacent to each other. The keyboard system permits the entry of data into a computer, radio system, interface or the like.

Other keyboard apparatuses and systems of possible relevance include the following U.S. Patents:

329,675; 477,062; 506,718; 578,785; 753,318;
1,293,023; 1,409,386; 1,487,115; 1,733,605; 1,771,953;
1,932,914; 1,936,089; 1,998,063; 2,012,924; 2,028,516;
2,031,017; 2,040,248; 2,150,364; 2,187,592; 2,189,023;
2,190,752; 2,192,594; 2,200,807; 2,282,102; 2,312,138;
2,390,414; 2,428,605; 2,520,142; 2,532,228; 2,581,665;
2,616,198; 2,634,052; 2,641,769; 2,718,633; 2,823,468;
2,850,812; 2,972,140; 3,021,611; 3,022,878; 3,102,254;

3,166,856; 3,184,554; 3,197,889; 3,225,883; 3,234,664;
3,241,115; 3,277,587; 3,369,643; 3,375,497; 3,381,276;
3,428,747; 3,466,647; 3,507,376; 3,526,892; 3,582,554;
3,633,724; 3,675,513; 3,772,597; 3,781,802; 3,798,599;
3,818,448; 3,831,147; 3,831,296; 3,833,765; 3,879,722;
3,929,216; 3,945,482; 3,967,273; 3,970,185; 3,980,823;
3,982,236; 4,042,777; 4,067,431; 4,074,444; 4,132,976;
4,159,471; 4,185,282; 4,333,097; 4,350,055; 4,360,892;
4,467,321; 4,494,109; 4,516,939; 4,655,621; 4,680,572;
4,791,408; 4,804,279; 5,087,910; 5,217,311; 5,281,966;
5,361,083; 5,459,458; 5,486,058; 5,459,458; 5,515,305;
5,642,108, and an IBM Technical Disclosure Bulletin Vol. 18
No. 12 dated May 1976 entitled; DIGITAL X TYPEWRITER KEYBOARD
which discloses two sets of five ergonomically arranged keys for
each hand, where each key is operated by one of the ten digits
on the left and right hands. The two thumb keys each produce a
space. The eight finger keys use a three position switch
(down, away and toward) or a five position switch as home row
keys. Downward activation produces home row data, away
activation produces top alphabetic row data and toward
activation produces bottom row data found on the QWERTY
keyboard.

While the foregoing all appear to represent improvements
in the art of keyboard systems, they nevertheless tend to be
difficult to learn and difficult to use, especially by
individuals who are sight, hearing, learning or motion

impaired. Of all the patents and technologies researched, none use or claim an eight bit binary computer code used as a data entry means. The most relevant technologies to this patent application are IBM's three copyrighted seven bit codes

5 (excluding the parity bit); the eight bit EBCDIC computer code (Extended Binary Coded Decimal Interchange Code), the eight bit ASCII (American Standard Code for Information Interchange) code and the extended ASCII computer code. The eight dot computer braille code is a top dot configured code and is read as an entire cell from top to bottom.

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SUMMARY OF THE INVENTION

5 Briefly described, the present invention uses an eight
bit binary code arrangement, read from left to right, on at
least eight sensors using a four bit binary code combined with
a four bit binary code system, read from left to right, to
10 produce data. The first left binary bit of the binary code has
the numeric value of one, the second left binary bit has the
numeric value of two, the third left binary bit has the
numeric value of four, the fourth left binary bit has the
numeric value of eight, the fifth right binary bit has the
15 numeric value of sixteen, the sixth right binary bit has the
numeric value of thirty-two, the seventh right binary bit has
the numeric value of sixty-four, and the last eighth right
binary bit has the numeric value of one hundred and twenty-
eight.

The present invention comprises an eight bit binary code
for use as an alternative eight dot braille arrangement, an
alphanumeric data entry system and method for chordic eight
key or eight sensor binary keyboards or a method of finger
20 braille communication for the deaf-blind.

Activation of at least one sensor enters an eight sensor
data entry mode. Activation of at least one sensor can be an
"ON" button, a "hot" key on a device, a mode change button,
etc. Activating at least one sensor of at least eight sensors
25 enters an eight sensor data entry mode. Activation of at least

one sensor can be an "ON" button, a "hot" key on a device, a mode change button, etc. Activating all eight sensors enters an eight sensor data entry mode. Activation of all eight sensors can be eight sensors on a keyboard, eight sensors on a split space bar keyboard, eight sensors on a touch screen data entry device, etc.

The present invention produces a data character, function or data character string (macro) by activating at least one sensor of the eight sensors used. Activating at least one sensor of the eight sensors followed by the activation of at least one sensor of the eight sensors produces a secondary data character (upper-case letters / extended character sets), a function or a data character string (macro).

Activating at least one sensor of a first set of four sensors combined with an unused second set of four sensors produces a vowel. Activating at least one sensor of a first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a vowel or a vowel with a diacritical mark. Activating at least one sensor of a first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a consonant. An unused first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a space. An unused first set of four sensors combined with the activation of at least

one sensor of a second set of four sensors produces a punctuation mark. Activating at least one sensor of a first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a symbol.

5 Activating at least one sensor of a first set of four sensors combined with the activation of all the sensors of a second set of four sensors produces a number or a math function. Activating at least one sensor of a first set of four sensors combined with the activation of all the sensors except one

10 sensor of a second set of four sensors produces a function.

The present invention also uses a split space bar keyboard as a data entry device where the fourth left binary bit has the numeric value of eight and is a left thumb sensor or a left space bar, and the fifth right binary bit has the

15 numeric value of sixteen and is a right thumb sensor or a right space bar.

Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves an object in a first direction by activating a left sensor and moves an object in a

20 second opposite direction by activating a right sensor.

Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves an object to the left by activating a left sensor and moves an object to the right by activating a right sensor. Any apparatus for entering data on

25 at least eight sensors or on any two sensor apparatus rotates

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an object to the left by activating a left sensor and rotates
an object to the right by activating a right sensor. Any
apparatus for entering data on at least eight sensors or on
any two sensor apparatus moves an object backward by
activating a left sensor and moves an object forward by
activating a right sensor. Any apparatus for entering data on
at least eight sensors or on any two sensor apparatus moves an
object forward by activating a left sensor and activating a
right sensor simultaneously. Any apparatus for entering data
on at least eight sensors or on any two sensor apparatus moves
an object backward by activating a left sensor and a right
sensor simultaneously followed by activating a left sensor and
a right sensor simultaneously.

Any apparatus for entering data on at least eight sensors
or on any two sensor apparatus moves the cursor to the left
activating a left sensor and moves the cursor to the right by
activating a right sensor. Any apparatus for entering data on
at least eight sensors or on any two sensor apparatus deletes
data to the left of the cursor by activating a left sensor and
deletes data to the right of the cursor by activating a right
sensor. Any apparatus for entering data on at least eight
sensors or on any two sensor apparatus reverses the last
change by activating a left sensor and reverses the last undo
by activating a right sensor.

Any apparatus for entering data on at least eight sensors

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5 or on any two sensor apparatus exits a first data entry mode and enters a cursor movement mode by activating a left thumb sensor and a right thumb sensor simultaneously, followed by the activation of a left thumb sensor moves the cursor to the left and activation of a right thumb sensor moves a cursor to the right. Activating a left thumb sensor and a right thumb sensor simultaneously exits a cursor movement mode and enters a delete mode, followed by the activation of a left thumb sensor deletes data to the left of a cursor and activating a right thumb sensor deletes data to the right of a cursor. Activating a left thumb sensor and a right thumb sensor simultaneously exits a delete mode and re-enters a first data entry mode.

15 One preferred feature of the present invention uses at least eight sensors to produce secondary types of data by exiting a first mode and shifting into a second mode by the entry of at least one data character. The shift function is included in the eight sensor code allowing the ability to use the shift for entering secondary data sets. Shifting into a secondary mode like the bold, italics, underline, etc. mode, 20 is produced by entering the b, i, u, etc.

25 Another feature of the present invention uses at least eight sensors to produce secondary types of language script data sets by exiting a first mode and shifting into a second mode by entering the language code data character string to

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produce a secondary language script data set. Entering the country code data character string produces a secondary language script data set. Entering the country's area code data character string produces a secondary language script data set.

The system and method of the invention is logically developed and implemented so that it is easy to learn and quick to use, especially for those who are handicapped or sight impaired.

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These and other features of the present invention will be more fully understood by reference to the following drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A-1P. Illustrates one preferred arrangement of the eight bit code embodiment of the disclosed invention.

FIG. 2. Illustrates a the frequency of letters used in the English language found in (a)press reporting, (b)religious writing, (c)scientific writing, (d)general fiction, (e)word averages and (f)Morse Code.

FIG. 3A. Illustrates one preferred layout of the eight bit code embodiment for lower-case letters.

FIG. 3B. Illustrates one preferred layout of the eight bit code embodiment for upper-case letters.

FIG. 3C. Illustrates one preferred layout of the eight bit code embodiment for punctuation.

FIG. 3D. Illustrates one preferred layout of the eight bit code embodiment for containment chords.

FIG. 3E. Illustrates one preferred layout of the eight bit code embodiment for horizontal and vertical lines.

FIG. 3F. Illustrates one preferred layout of the eight bit code embodiment for numbers.

FIG. 3G. Illustrates one preferred layout of the eight bit code embodiment for common math functions.

FIG. 3H. Illustrates one preferred layout of the eight bit code embodiment for functions.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

During the course of this description, the reverse binary numeric value (#0)-(#255) will be used to identify like elements according to the different figures and tables which illustrate the invention. For ease of discussion, during the course of this description, the Phone Code, the left (1-4-7-*) and right (#-9-6-3) rows on a standard twelve button phone, will also be used to easily identify like elements according to the different figures and tables which illustrate the invention. The correlation between the Reverse binary (code), KEYS pressed (QWERTY keyboard), Fingers (used) and Finger Braille (sender) tables is understood as the same code arrangement with different representations. In the KEYS pressed for the QWERTY keyboard table, "<" is the left space bar and ">" is the right space bar. A useful mnemonic technique is to remember the preferred right hand digit representation is by the phonetic word TIMR (timer) which stands for the thumb (T), index (I), middle (M), and ring (R) digits. In order to more fully understand the invention, the preferred embodiment of the invention is shown in FIGS. 1A-1P and is restructured for easier learning and memorization in FIGS. 3A-3L. FIG. 2 shows the frequency of letters used in the English language and the mnemonic logic of invention shown in FIGS. 3A-3L. The preferred embodiment of the invention is also shown in FIGS 4A-4B as eight dot braille arrangement.

The present invention uses an eight bit binary code arrangement read from left to right on at least eight sensors using a four bit binary code combined with a four bit binary code system, read from left to right, to produce data. The first left binary bit of the binary code has the numeric value of one and is preferably a ring digit sensor, the second left binary bit has the numeric value of two and is preferably a middle digit sensor, the third left binary bit has the numeric value of four and is preferably an index digit sensor, the fourth left binary bit has the numeric value of eight and is preferably a thumb digit sensor, the fifth right binary bit has the numeric value of sixteen and is preferably a thumb digit sensor, the sixth right binary bit has the numeric value of thirty-two and is preferably an index digit sensor, the seventh right binary bit has the numeric value of sixty-four and is preferably a middle digit sensor, and the last eighth right binary bit has the numeric value of one hundred and twenty-eight and is preferably a ring digit sensor.

Of one preferred arrangement of the eight bit code embodiment is illustrated in FIG. 1A-1P. The data entry keyboard system includes at least eight binary sensors divided up into two sets of four binary sensors each. A first set of four sensors includes four binary sensors which are preferably adapted to be depressed or activated, respectively, by the ring digit, middle digit, index digit and thumb digit of the first preferred left hand group of the operator. The little

digit of the first preferred left hand group is not used according to the preferred embodiment, but can be used instead of the thumb. Similarly, a second set includes the following four binary sensors which are preferably adapted to be depressed or activated, respectively, by the thumb digit, index digit, middle digit and ring digit of the second preferred right hand group of the operator. The little digit of the second preferred right hand group is not used, according to the preferred embodiment, but can be used instead of the thumb.

The present invention comprises an eight bit binary code for use as an alternative eight dot braille arrangement, an alphanumeric data entry system and method for chordic eight key or eight sensor binary keyboards or a method of finger braille communication for the deaf-blind.

Activation of at least one sensor enters an eight sensor data entry mode. Activation of at least one sensor can be an "ON" button, a "hot" key on a device, a mode change button, etc. Activating at least one sensor of at least eight sensors enters an eight sensor data entry mode. Activation of at least one sensor of the eight sensors used can be an "ON" button, a "hot" key on a device, a mode change button, etc. Activating all eight sensors enters an eight sensor data entry mode. Activation of all eight sensors can be eight sensors on a keyboard, eight sensors on a split space bar keyboard, eight

sensors on a touch screen data entry device, etc.

The present invention produces a data character, function or data character string (macro) by activating at least one sensor of the eight sensors used. Activating at least one
5 sensor of the eight sensors combined with the activation of at least one sensor of the eight sensors produces a secondary data character (upper-case letters / extended character sets), a function or a data character string (macro).

The entry of vowels is produced with a first group of four binary sensors activated by four digits of the first group or preferred left hand. The entry of consonants is produced with a second group of four binary sensors activated by four digits of the second group or preferred right hand in simultaneous combination with the consonant's preceding binary vowel chord produced on a first group of four binary sensors activated by the four digits of the first group or preferred left hand.

Activating at least one sensor of a first set of four sensors combined with an unused second set of four sensors
20 produces a vowel. Activating at least one sensor of a first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a vowel or a vowel with a diacritical mark found in non-English alphabet based languages.

25 The vowels "a", "e", "i", and "o" are produced by a

binary key or sensor of a first set of four binary sensors
activated by a first group of four digits of the first
preferred left hand from right to left by independently
activating the preferred thumb digit for the "a", the
5 preferred index digit for the "e", the preferred middle digit
for the "i" or preferred ring digit for the "o", respectively,
of the first group of four digits of the preferred left first
hand group against the corresponding binary key or sensor of
the first set of four binary sensors. The vowel "u" is
10 produced by simultaneously activating the two inside binary
sensors of a first set of four binary sensors by the two
inside digits, the preferred index and middle digit of the
first group of four digits of the preferred left first hand
group. The vowel "y" is produced by simultaneously activating
5 the two outside binary sensors of a first set of four binary
sensors by the two outside digits, the preferred ring and
thumb digits of the first group of four digits of the
preferred left first hand group.

Lower-case letters are produced according to the table
20 illustrated in FIG. 3A. The vowels "a" (#8), "e" (#4), "i" (#2)
and "o" (#1) are produced by independently activating,
respectively, the four binary sensors (*), (7), (4) and (1) of
the preferred left first set by the preferred thumb digit (*),
the preferred index digit (7), the preferred middle digit (4)
25 and the preferred ring digit (1) on the preferred left first
hand group, respectively. The vowel "u" (#6) is produced by

simultaneously activating the two inner binary sensors by the middle digit (4) and the index digit (7). These are the two inside digits of the preferred left first hand group and is logically suggestive of the vowel "u" used in sign language for the deaf. The occasional vowel "y" (#9) is produced by simultaneously activating the two outer binary sensors by the ring digit (1) and the thumb digit (*). These are the two outside digits of the preferred left first hand group and is logically suggestive of the vowel "y" used in sign language for the deaf.

All consonants are produced by a second set of four binary sensors by depression or activation with the preferred right second hand group binary chords in simultaneous combination with binary vowel chords produced on the first set of four binary sensors by the preferred left first hand group. The keyboard system and method takes advantage of the fact that the vowels "a" (#8), "e" (#4), "i" (#2), "o" (#1), "u" (#6) and "y" (#9) are somewhat evenly distributed throughout the alphabet separated by either three or five consonants in each case. There are five consonants following the vowels "i" and "o". In the vowel "i" binary consonant chord grouping, the consonants "l" (#34), "m" (#66) and "n" (#130) are the consonants more frequently used, and in the vowel "o" binary consonant chord grouping, the consonants "r" (#33), "s" (#65) and "t" (#129) are the consonants more frequently used. Therefore, the least used consonants "j" (#98), "k" (#194) and "p" (#97),

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5 "q" (#193) are given an extra binary bit each for their preferred right second hand group binary consonant chords. FIG. 3A. is a table summarizing the manner in which lower case English language alphabet letters "a" (#8) through "z" (#41) are produced; either by use of the first set of four binary sensors depressed or activated by the preferred left first hand group exclusively (in the case of producing vowels), or through the use of the first set of four binary sensors depressed or activated by the preferred left first hand group in simultaneous combination with the second set of four binary sensors depressed or activated by the preferred right second hand group to produce consonants.

15 Activating at least one sensor of a first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a consonant.

20 Consonants are produced by simultaneously producing a binary vowel chord with the first set of four binary sensors by a first group of four digits of the preferred left first hand group and simultaneously activating the appropriate binary sensors of a second set of four binary sensors with the second group of four digits, the preferred thumb, index, middle or ring digit or digits of the preferred right second hand group. Because the vowels a, e, i, o, u and y are relatively evenly distributed throughout the alphabet, it
25 makes logical sense to form the consonants "b" (#40), "c" (#72)

and "d" (#136) with the depression or activation of a binary key or sensor by the preferred thumb digit of the preferred left first hand group, the vowel "a" (#8), in simultaneous combination with the depression or activation of a binary key or sensor of a second set of four binary sensors by the index digit for the consonant "b", middle digit for the consonant "c" and ring digit for the consonant "d", respectively, of the second group of four digits of the preferred right second hand group.

An unused first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a space. Independent activation of the first preferred right thumb binary key or sensor (#) produces a "space".

Lower-case letters are produced according to the table illustrated in FIG. 3A.

Activating (#) produces "space" (#16),
activating (*) produces "a" (#8),
activating (*) (9) produces "b" (#40),
activating (*) (6) produces "c" (#72),
activating (*) (3) produces "d" (#136),
activating (7) produces "e" (#4),
activating (7) (9) produces "f" (#36),
activating (7) (6) produces "g" (#68),
activating (7) (3) produces "h" (#132),
activating (4) produces "i" (#2),
activating (4) (9) (6) produces "j" (#98),
activating (4) (6) (3) produces "k" (#194),
activating (4) (9) produces "l" (#34),

activating (4) (6) produces "m" (#66),
 activating (4) (3) produces "n" (#130),
 activating (1) produces "o" (#1),
 activating (1) (9) (6) produces "p" (#97),
 activating (1) (6) (3) produces "q" (#193),
 activating (1) (9) produces "r" (#33),
 activating (1) (6) produces "s" (#65),
 activating (1) (3) produces "t" (#129),
 activating (4) (7) produces "u" (#6),
 activating (4) (7) (9) produces "v" (#38),
 activating (4) (7) (6) produces "w" (#70),
 activating (4) (7) (3) produces "x" (#134),
 activating (1) (*) produces "y" (#9), and
 activating (1) (*) (9) produces "z" (#41).

Independent activation of the first preferred right thumb binary key or sensor (#) produces a "space". Activation of the first preferred right thumb binary key or sensor (#) produces the "Shift" function when combined with a vowel or a consonant.

Capital letters are produced according to the table illustrated in FIG. 3B.

Activating (#) produces "space" (#16),
 activating (*) (#) produces "A" (#24),
 activating (*) (#) (9) produces "B" (#56),
 activating (*) (#) (6) produces "C" (#88),
 activating (*) (#) (3) produces "D" (#152),
 activating (7) (#) produces "E" (#20),
 activating (7) (#) (9) produces "F" (#52),
 activating (7) (#) (6) produces "G" (#84),
 activating (7) (#) (3) produces "H" (#148),
 activating (4) (#) produces "I" (#18),
 activating (4) (#) (9) (6) produces "J" (#114),
 activating (4) (#) (6) (3) produces "K" (#210),

activating (4) (#) (9) produces "L" (#50),
 activating (4) (#) (6) produces "M" (#82),
 activating (4) (#) (3) produces "N" (#146),
 activating (1) (#) produces "O" (#17),
 activating (1) (#) (9) (6) produces "P" (#113),
 activating (1) (#) (6) (3) produces "Q" (#209),
 activating (1) (#) (9) produces "R" (#49),
 activating (1) (#) (6) produces "S" (#81),
 activating (1) (#) (3) produces "T" (#145),
 activating (4) (#) (7) produces "U" (#22),
 activating (4) (#) (7) (9) produces "V" (#54),
 activating (4) (#) (7) (6) produces "W" (#86),
 activating (4) (#) (7) (3) produces "X" (#150),
 activating (1) (#) (*) produces "Y" (#25), and
 activating (1) (#) (*) (9) produces "Z" (#57).

An unused first set of four sensors combined with the activation of at least one sensor of a second set of four sensors produces a punctuation mark.

Shown in the table in FIG. 3c, punctuation marks are produced using only the second set of four binary sensors depressed or activated by the preferred right second hand group. The logic behind using the preferred right second hand group only is that most punctuation occurs at the far right end of a group of words or a sentence.

Punctuation is produced according to the table illustrated in FIG. 3C.

Activating (9) produces "." (#32),
 activating (3) produces "," (#128),
 activating (6) produces "!" (#64),
 activating (#) (9) (6) produces "?" (#112),
 activating (9) (6) produces ":" (#96),

activating (9) (3) produces ";"(#160),
activating (#) (9) (3) produces ""(#176), and
activating (#) (3) produces "'"(#144).

Activating at least one sensor of a first set of four
5 sensors combined with the activation of at least one sensor of
a second set of four sensors produces a symbol.

Monetary symbols are produced according to the table
illustrated in FIG. 3J.

Activating (1) (4) (6) produces "\$" (#67),
activating (1) (4) (3) produces "C" (#131),
activating (1) (4) produces "¤" (#3),
activating (1) (4) (9) produces "€" (#35),
activating (1) (4) (#) (9) produces "£" (#51),
activating (1) (4) (#) (9) produces "¥" (#99),
activating (1) (4) (6) (3) produces "฿" (#195),
activating (1) (4) (#) (9) (6) produces "₹" (#115),
activating (1) (4) (#) (6) produces "₪" (#83),
activating (1) (4) (#) produces "₹" (#19), and
activating (4) (*) (#) (6) produces "₹" (#165).

It is possible to choose a variety of data entry choices
including containment groups, movement chords, operating
chords (e.g., enter, tab, shift, insert, etc.), Latin based
foreign language letters, consonants and punctuation,
punctuation marks, monetary symbols, symbols and graphics,
25 chords, containment chords, etc.

For example, the table in FIG. 3H illustrates certain
binary containment chord groups that have mirror image binary
chords. Containment groups are instructions like brackets [],

parentheses (), etc. It is also useful to provide the common movement instructions such as moving a cursor up or down, tab, home, . page up or down, etc.

Containment chords are produced according to the table illustrated in FIG. 3D.

Activating (4) (*) produces "(" (#10),
activating (#) (6) produces ")" (#80),
activating (1) (4) (*) produces "[" (#11),
activating (#) (6) (3) produces "]" (#208),
activating (1) (7) (*) (3) produces "{" (#141),
activating (1) (#) (9) (3) produces "}" (#177),
activating (7) (9) (3) produces "<" (#164),
activating (1) (7) (9) produces ">" (#37),
activating (4) (7) (*) (#) (9) produces "<" (#62),
activating (7) (*) (#) (9) (6) produces ">" (#124),
activating (1) (7) (*) produces "\"" (#13), and
activating (#) (9) (3) produces "\"" (#176).

Control element chords are produced according to the table illustrated in FIG. 3K.

Activating (9) (6) (3) produces "Enter" (#7),
activating (1) (4) (*) (#) produces "Esc" (#27),
activating (6) (3) produces "Tab" (#192),
activating (4) (7) (*) (#) produces "PgUp" (#30),
activating (4) (7) (*) (3) produces "PgDn" (#142),
activating (1) (4) (7) (*) (#) produces "Up" (#31),
activating (1) (4) (7) (*) (3) produces "Down" (#143),
activating (1) (4) (7) (*) (#) (9) produces "Left" (#63),
activating (1) (4) (7) (*) (6) (3) produces "Right" (#207),
activating (1) (4) (7) (*) (9) (6) produces "Home" (#111),
activating (4) (7) (*) (#) (6) produces "End" (#94),
activating (1) (4) (7) (*) (#) (9) (3) produces "Shift" (#191),
activating (1) (4) (7) (*) (9) (3) produces "Shift Out" (#175),

activating (1)(4)(7)(*)(9) produces "Ctrl" (#47),
activating (1)(4)(7)(*)(#)(6)(3) produces "Alt" (#223),
activating (1)(4)(7)(*)(#)(9)(6)(3) produces "Ins" (#255), and
activating (1)(4)(7)(*) produces "Delete" (#15).

5 Horizontal and vertical lines are produced according to
the table illustrated in FIG. 3E.

Activating (1)(4)(7)(#) produces "_" (#23),
activating (1)(4)(7)(9) produces "\" (#39),
activating (1)(4)(7)(6) produces "|" (#71), and
10 activating (1)(4)(7)(3) produces "/" (#135).

Activating at least one sensor of a first set of four
sensors combined with the activation of all the sensors of a
second set of four sensors produces a number or a math
function.

10071952-45 The system enters or produces the number mode by the
simultaneous depression or activation of a second set of four
binary sensors by a second group of four digits, the preferred
thumb, index, middle and ring digits of the preferred right
second hand group in simultaneous combination with the entry
20 or production of the desired specific binary number chord with
the four digits on the first group of four digits of the
preferred left hand group. The preferred left first hand group
digits enter or produce the specific chosen binary number
chords between 0 and 9 in a reverse binary abacus chordic
25 fashion with the preferred ring digit binary key or sensor of
the preferred left first hand group producing the binary
number "1" (#241), the preferred middle digit binary key or

sensor producing the binary number "2" (#242), the preferred index digit binary key or sensor producing the binary number "4" (#244), the preferred thumb digit binary key or sensor producing the binary number "8" (#248), then using binary combinations of the first set of four binary sensors to produce the desired number. The numbers "10" (#250), "11" (#250), "12" (#250), "13" (#250) and "14" (#250) are used to produce the common math functions, where the binary number 10 chord produces the addition function "+"(#250), the binary number 11 chord produces the subtraction function "-"(#251), the binary number 12 chord produces the multiplication function "*"(#252), the binary number 13 chord produces the division function "/"(#253) and the binary number 14 chord produces the equals function "="(#254).

FIG. 3F. is a table illustrating the manner in which binary number chords are produced. In order to enter or produce a number, the operator substantially simultaneously depresses or activates all four binary sensors (#) (9) (6) (3) of a second set of four binary sensors depressed or activated with the preferred digits the thumb, index, middle and ring digits of the preferred right second hand group and selects the desired binary number chord for entry with the first set of four binary sensors depressed or activated by the preferred left first hand group. An unused feature of the keyboard system and method according to the preferred embodiment is that the individual numbers are produced in reverse binary

notation starting with the first preferred ring digit of the preferred left first hand group and ending with the eighth preferred thumb digit. If no binary sensor of the first left set of sensors is depressed or activated, then the number "0" (#240) is produced. Depression or activation of the far left first binary key or sensor (1) by the left ring digit enters produces the number "1" (#241), assuming, of course, that all of the binary sensors (#) (9) (6) (3) of the second preferred right set of four binary sensors are or has been substantially simultaneously depressed or activated. In this fashion it is possible to enter or produce the individual numbers "0" (#240) through "9" (#249) by the simultaneous binary chordic depression or activation of all of the four binary sensors of the second set of sensors along with the appropriate depression or activation of one or more binary sensors of the first set of sensors in a reverse binary fashion to produce the desired binary number. Exiting a number mode or any mode can be achieved by using the "shift out" (#175) function. The reason that a reverse binary fashion is chosen is that it is more common to read Latin based alphanumeric data from left to right in the same fashion that letters in words are read in the English language. This keeps the data entry system and method consistent in its format and is an easier way for people to learn to enter information using the system of data entry.

Common binary math function chords are illustrated in the

table of FIG. 3G. The reverse binary equivalents of the numbers "10" (#250) through "14" (#254) are used, respectively, by the number "10" (#250) binary chord to represent or produce the addition "+" symbol or function, the number "11" (#251) binary chord to represent or produce the multiplication "*" symbol or function, the number "12" (#252) binary chord to represent or produce the subtraction "-" symbol or function, the number "13" (#253) binary chord to represent or produce the division "/" symbol or function and the number "14" (#254) binary chord to represent or produce the equals "=" symbol or function.

Numbers are produced according to the table illustrated in FIG. 3F.

Activating (#) (9) (6) (3) produces "0" (#240),
activating (1) (#) (9) (6) (3) produces "1" (#241),
activating (4) (#) (9) (6) (3) produces "2" (#242),
activating (1) (4) (#) (9) (6) (3) produces "3" (#243),
activating (7) (#) (9) (6) (3) produces "4" (#244),
activating (1) (7) (#) (9) (6) (3) produces "5" (#245),
activating (4) (7) (#) (9) (6) (3) produces "6" (#246),
activating (1) (4) (7) (#) (9) (6) (3) produces "7" (#247),
activating (*) (#) (9) (6) (3) produces "8" (#248), and
activating (1) (*) (#) (9) (6) (3) produces "9" (#249).

Common math functions are produced according to the table illustrated in FIG. 3G.

Activating (4) (*) (#) (9) (6) (3) produces "+" (#250),
activating (1) (4) (*) (#) (9) (6) (3) produces "-" (#251),
activating (7) (*) (#) (9) (6) (3) produces "*" (#252),
activating (1) (7) (*) (#) (9) (6) (3) produces "/" (#253), and

activating (4) (7) (*) (#) (9) (6) (3) produces "=" (#254).

Activating at least one sensor of a first set of four sensors combined with the activation of all the sensors except one sensor of a second set of four sensors produces a function.

Fifteen functions are also obtainable. The system produces the numeric function by the simultaneous depression or activation of a second set of four binary sensors by a second group of four digits, the preferred index, middle and ring digits of the preferred right second hand group in simultaneous combination with the desired specific binary number chord with the four digits on the first group of four digits of the preferred left hand group. The preferred left first hand group digits enter or produce the specific chosen binary number chords between 0 and 9 in a reverse binary abacus chordic fashion with the preferred ring digit binary key or sensor of the preferred left first hand group producing the binary number "1" (#241), the preferred middle digit binary key or sensor producing the binary number "2" (#242), the preferred index digit binary key or sensor producing the binary number "4" (#244), the preferred thumb digit binary key or sensor producing the binary number "8" (#248), then using binary combinations of the first set of four binary sensors to produce the desired number.

In order to expand the utility of the system, it is

important to be able to choose from other function modes. Multifunction binary chord choices are produced according to the table illustrated in FIG. 3H. The multifunction binary chord mode choice is initiated or produced by the

5 substantially simultaneous depression or activation of a second set of four binary sensors depressed or activated by the preferred index digit, middle digit and ring digit of the preferred right second hand group, in simultaneous combination with the appropriate reverse binary choice of chords on a

10 second set of four binary sensors depressed or activated by the four digits of the preferred left first hand group. Up to 15 function mode choices are possible (F1-F15) given the fact that there are four binary sensors and 15 different distinct binary chordic combinations possible using four sensors, given

15 the particular binary chordic choice. Note that the functions F1-F15 correspond one for one with the reverse binary number chosen while in the number mode by the four digits of the preferred left first hand group.

Functions are produced according to the table illustrated in FIG. 3H.

Activating (1) (9) (6) (3) produces "F1" (#225),
activating (4) (9) (6) (3) produces "F2" (#226),
activating (1) (4) (9) (6) (3) produces "F3" (#227),
activating (7) (9) (6) (3) produces "F4" (#228),
25 activating (1) (7) (9) (6) (3) produces "F5" (#229),
activating (4) (7) (9) (6) (3) produces "F6" (#230),
activating (1) (4) (7) (9) (6) (3) produces "F7" (#231),
activating (*) (9) (6) (3) produces "F8" (#232),

activating (1) (*) (9) (6) (3) produces "F9" (#233),
activating (4) (*) (9) (6) (3) produces "F10" (#234),
activating (1) (4) (*) (9) (6) (3) produces "F11" (#235),
activating (7) (*) (9) (6) (3) produces "F12" (#236),
5 activating (1) (7) (*) (9) (6) (3) produces "F13" (#237),
activating (4) (7) (*) (9) (6) (3) produces "F14" (#238), and
activating (1) (4) (7) (*) (9) (6) (3) produces "F15" (#239).

The preferred input keyboard comprises eight binary
sensors arranged in two sets of four binary sensors each. The
10 first set of four binary sensors is preferably adapted for
convenient ergonomic depression or activation by the preferred
thumb, index, middle and ring digits on the four digits of a
first group or preferred left hand. Similarly, the second set
of four binary sensors is arranged for convenient ergonomic
15 depression or activation by four digits of a second group by
the preferred thumb, index, middle and ring digits on the four
digits of a second group or preferred right hand. The two sets
of four binary sensors are preferably arranged where each
binary key or sensor is located directly beneath the finger
20 tip of the activating digit, of an ergonomically positioned
hand, preferably in two ergonomically correct mirror imaged
pairs to best accommodate the natural ergonomically relaxed hand
position of the digits on the hands of a data entry keyboard
operator. Alternatively, the two sets may be arranged in two
25 vertical or horizontal mirror imaged rows of adjacent
crescents. The keyboard can also mimic the layout of an 8-dot
braille cell character arrangement which is shown in FIGS.4A-
4C.

The present invention also uses a split space bar keyboard as a data entry device where the fourth left binary bit has the numeric value of eight and is a left thumb sensor or a left space bar, and the fifth right binary bit has the numeric value of sixteen and is a right thumb sensor or a right space bar.

One preferred keyboard embodiment includes a first set of four sensors (1)(4)(7)(*), preferably including a left space bar for activation by a left thumb and a second set of four sensors (#)(9)(6)(3), preferably including a right space bar for activation by a right thumb. The first set of four sensors (1)(4)(7)(*) includes four binary sensors which are preferably adapted to be depressed or activated, respectively, by the preferred ring digit, middle digit, index digit and thumb digit on the left hand of the operator. Similarly, the second set of four sensors (#)(9)(6)(3), includes four binary sensors which are preferably adapted to be depressed or activated, respectively, by the preferred ring digit, middle digit, index digit and thumb digit on the right hand of the operator.

Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves an object in a first direction by activating a left sensor and moves an object in a second opposite direction by activating a right sensor. Movement within a virtual reality environment can easily be obtained by using a left sensor and a right sensor. Movement

for a robot or a machine can easily be obtained by using a left sensor and a right sensor. A computer mouse can be one preferred embodiment of the invention. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves an object to the left by activating a left sensor and moves an object to the right by activating a right sensor. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus rotates an object to the left by activating a left sensor and rotates an object to the right by activating a right sensor. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves an object backward by activating a left sensor and moves an object forward by activating a right sensor. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves an object forward by activating a left sensor and activating a right sensor simultaneously. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves an object backward by activating a left sensor and a right sensor simultaneously followed by activating a left sensor and a right sensor simultaneously.

The same logic can be used on a data entry device for a computer, typewriter or mouse. One preferred keyboard design would be the split space bar QWERTY keyboard. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus moves the cursor to the left activating a

left sensor or left space bar and moves the cursor to the right by activating a right sensor or right space bar. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus deletes data to the left of the cursor by activating a left sensor or left space bar and deletes data to the right of the cursor by activating a right sensor or right space bar. Any apparatus for entering data on at least eight sensors or on any two sensor apparatus reverses the last change by activating a left sensor or left space bar and reverses the last undo by activating a right sensor or right space bar.

Any apparatus for entering data on at least eight sensors or on any two sensor apparatus exits a first data entry mode and enters a cursor movement mode by activating a left thumb sensor or left space bar and a right thumb sensor or right space bar simultaneously, followed by the activation of a left thumb sensor or left space bar moves the cursor to the left and activation of a right thumb sensor or right space bar moves a cursor to the right. Activating a left thumb sensor or left space bar and a right thumb sensor or right space bar simultaneously exits a cursor movement mode and enters a delete mode, followed by the activation of a left thumb sensor or left space bar deletes data to the left of a cursor and activating a right thumb sensor or right space bar deletes data to the right of a cursor. Activating a left thumb sensor or left space bar and a right thumb sensor or right space bar

simultaneously exits a delete mode and re-enters a first data entry mode.

One preferred feature of the present invention uses at least eight sensors to produce secondary types of data by exiting a first mode and shifting into a second mode by the entry of at least one data character. The one data character can be a non-English lower-case letter, where the shift produces an non-English upper-case letter. The shift function is included in the eight bit code allowing the ability to use the shift for entering secondary data sets. Shifting into (#191) a secondary mode like the bold, italics, underline, etc. mode, is produced by entering the b, i, u, etc. Exiting a mode or any modes can be achieved by using the "shift out" (#175) function.

Because there are a total of eight binary sensors, it is possible to form a total of 255 binary chordic combinations ($2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 256$). These combinations are summarized in the table illustrated in FIGS. 1A-1P. If activation of the shifting chord combination is employed, "Shift" (#191), it offers the potential of entering a secondary sets of 255 unassigned eight bit binary chord groups, which can be used for a multiplicity of modes, such as different types or sizes of fonts, bold mode, italics mode, underline mode, highlight mode, language scripts, country scripts or whatever extra mode is required, a feature which substantially expands the

capability of the invention. The shift function is part of the eight sensor code. Since the shift function is not used to produce an upper-case vowel or consonant, combining it with an upper-case or lower-case vowel or consonant enters a secondary keyboard mode. Producing the shift function combined with a "b" and followed by the activation of the enter function enters the bold mode. Producing the shift function combined with a "i" and followed by the activation of the enter function enters the italics mode. Producing the shift function combined with a "u" and followed by the activation of the enter function enters the underline mode. Producing the shift function combined with a "h" and followed by the activation of the enter function enters the highlight mode. Producing the shift function combined with any vowel, consonant, number, function, letters, numbers, etc. and preferably followed by the activation of the enter function enters a multiplicity of possible modes. Exiting a mode or any modes can be achieved by using the "shift out" (#175) function.

Another feature of the present invention uses at least eight sensors to produce secondary types of language script data sets by exiting a first mode and shifting into a second mode by entering the language code data character string to produce a secondary language script data set. Entering the country code data character string produces a secondary language script data set. Entering the country's area code data character string produces a secondary language script

data set. Exiting a mode or any modes can be achieved by using the "shift out" (#175) function.

Using the ISO Alpha-2 and Alpha-3 language codes as a way of assigning names to secondary eight bit data character sets, is one possible way of producing the secondary chordic combinations sets for any and all language alphabet scripts or character sets. Entry of the preferred Alpha-2 and Alpha-3 language codes exits the standard eight bit binary chordic data entry method mode, found in this patent application, and enters a secondary eight bit binary chordic data entry method mode set. Languages with extensive alphabet scripts or character sets, like Chinese, requires an eight bit binary data chord followed by an extra secondary eight bit binary data chord. Reassigning the present eight bit binary code invention arrangement, without departing from the spirit and scope of the invention as a whole, produces all language alphabet scripts or character sets.

ab	or	abk	for	Abkhazian
		ace	for	Achinese
		ach	for	Acoli
		ada	for	Adangme
om	or	gal/orm	for	Afan (Oromo)
aa	or	aar	for	Afar
		afh	for	Afrihili (Artificial language)
af	or	afr	for	Afrikaans
		afa	for	Afro-Asiatic (Other)
		aka	for	Akan
		akk	for	Akkadian
sq	or	alb/sqi	for	Albanian

		ale	for	Aleut	
		alg	for	Algonquian languages	
		ajm	for	Aljamia	
		tut	for	Altaic (Other)	
5		cai	for	American, Central Indian (Other)	
		nai	for	American Indian, North (Other)	
		sai	for	American Indian, South (Other)	
	am	or	amh	for	Amharic
		apa	for	Apache languages	
10	ar	or	ara	for	Arabic
		arc	for	Aramaic	
		arp	for	Arapaho	
		arn	for	Araucanian	
		sam	for	Aramaic, Samaritan	
15		arw	for	Arawak	
	hy	or	arm/hye	for	Armenian
		art	for	Artificial (Other)	
		afa	for	Asiatic, Afro- (Other)	
	as	or	asm	for	Assamese
20		ath	for	Athapascan languages	
		aus	for	Australian languages	
		map	for	Austronesian (Other)	
		ava	for	Avaric (Avar)	
		ave	for	Avestan	
25		awa	for	Awandhi	
	ay	or	aym	for	Aymara (Aymar�)
	az	or	aze	for	Azerbaijani
		nah	for	Aztec	
		ban	for	Balinese	
30		bat	for	Baltic (Other)	
		bal	for	Baluchi	
		bam	for	Bambara	
		bai	for	Bamileke languages	
		bad	for	Banda	
35		bnt	for	Bantu (Other)	
		bas	for	Basa (Kru)	
	ba	or	bak	for	Bashkir
	eu	or	baq/eus	for	Basque

		bej	for	Beja
		bel	for	Belorussian (Belarusian)
		bem	for	Bemba
5	bn or	ben	for	Bengali (Bangla)
		ber	for	Berber languages
		bho	for	Bhojpuri
	dz		for	Bhutani
	bh or	bih	for	Bihari
		bik	for	Bikol
10		bin	for	Bini
	bi or	bis	for	Bislama
		nob	for	Bokmål, Norwegian
		bos	for	Bosnian
		bra	for	Braj
15	br or	bre	for	Breton
		bug	for	Buginese
	bg or	bul	for	Bulgarian
		bua	for	Buriat
	my or	bur/mya	for	Burmese
20		bel	for	Burushaski
	be		for	Byelorussian
		cad	for	Caddo
	km or	khm	for	Cambodian (Khmer)
		car	for	Carib
25		spa	for	Castilian
	ca or	cat	for	Catalan
		cau	for	Caucasian (Other)
		ceb	for	Cebuano
		cel	for	Celtic (Other)
30		cai	for	Central American Indian (Other)
		chg	for	Chagatai
		cmc	for	Chamic languages
		cha	for	Chamorro
		che	for	Chechen
35		chr	for	Cherokee
		chy	for	Cheyenne
		chb	for	Chibcha
		nya	for	Chichewa

	zh	or	chi/zho	for	Chinese
			chn	for	Chinook jargon
			chp	for	Chipewyan
			cho	for	Choctaw
5			chu	for	Church Slavic
			chk	for	Chuukese
			chv	for	Chuvash
			cop	for	Coptic
			cor	for	Cornish
10	co	or	cos	for	Corsican
			cre	for	Cree
			mus	for	Creek
			crp	for	Creoles and pidgins (Other)
			cpe	for	Creoles and pidgins, English (Other)
15			cpf	for	Creoles and pidgins, French (Other)
			cpp	for	Creoles and pidgins, Portuguese (Other)
	hr	or	scr/hrv	for	Croatian (Serbo-Croatian)
			cus	for	Cushitic (Other)
	cs	or	ces/cze	for	Czech
20			dak	for	Dakota
	da	or	dan	for	Danish
			day	for	Dayak
			del	for	Delaware
			din	for	Dinka
25			div	for	Divehi
			doi	for	Dogri
			dgr	for	Dogrib
			dra	for	Dravidian (Other)
			dua	for	Duala
30	nl	or	dut/nld	for	Dutch
			dum	for	Dutch, Middle (ca. 1050-1350)
			dyu	for	Dyula
			dzo	for	Dzongkha
			efi	for	Efik
35			egy	for	Egyptian (Ancient)
			eka	for	Ekaajuk
			elx	for	Elamite
	en	or	eng	for	English

		en-cokney	for	English (London docks dialect)
		enm	for	English, Middle (1100-1500)
		ang	for	English, Old (ca. 450-1100)
		cpe	for	English-based Creoles & pidgins (Other)
5		esk	for	Eskimo (Other)
	eo or	epo/esp	for	Esperanto
	et or	est	for	Estonian
		eth	for	Ethiopic
		ewe	for	Ewe (Fon)
10		ewo	for	Ewondo
		fan	for	Fang
		fat	for	Fanti
	fo or	fao/far	for	Faroeese
	fj or	fij	for	Fijian (Fiji)
15	fi or	fin	for	Finnish
		fiu	for	Finno-Ugrian (Other)
		fon	for	Fon
	fr or	fra/fre	for	French
		frm	for	French, Middel (ca. 1400-1600)
20		fro	for	French, Old (ca. 842-1400)
		cpf	for	French-based Creoles and pidgins (Other)
	fy or	fry	for	Frisian
		fur	for	Friulian
		ful	for	Fulah
25		gaa	for	Ga (Gb)
		gla	for	Gaelic
	gd or	gae/gdh	for	Gaelic (Scots)
	gl		for	Galician
		gag/glg	for	Gallegan
30		lug	for	Ganda
		gay	for	Gayo
		gez	for	Geez
	ka or	geo/kat	for	Georgian
	de or	deu/ger	for	German
35		nds	for	German, Low
		gmh	for	German, Middle High (ca. 1050-1500)
		goh	for	German, Old High (ca. 750-1050)
		gem	for	Germanic (Other)

	iu	or	iku	for	Inuktitut (Eskimo)
	ik	or	ipk	for	Inupiak (Inupiaq)
			ira	for	Iranian (Other)
5	ga	or	iri/gai	for	Irish
			gle	for	Irish
			mga	for	Irish, Middle (900-1200)
			sga	for	Irish, Old (to 900)
			iro	for	Iroquoian languages
10	it	or	ita	for	Italian
	ja	or	jpn	for	Japanese
	jv	or	jav/jaw	for	Javanese
			jrb	for	Judeo-Arabic
			jpr	for	Judeo-Persian
			kab	for	Kabyle
15			kac	for	Kachin
			kal	for	Kalaallisut
			kam	for	Kamba
	kn	or	kan	for	Kannada
			kau	for	Kanuri
20			kaa	for	Kara-Kalpak
			kar	for	Karen
	ks	or	kas	for	Kashmiri
			kaw	for	Kawi
	kk	or	kaz	for	Kazakh
25			kha	for	Khasi
	km	or	cam/khm	for	Khmer (Cambodian)
			khi	for	Khoisan (Other)
			kho	for	Khotanese
			kik	for	Kikuyu
30			kmj	for	Kimbundu
	rw	or	kin	for	Kinyarwanda
			kir	for	Kirghiz
	ky			for	Kirgiz
			x-klíngon	for	Klingon (Star Trek)
35			khm	for	Khmer (Cambodian)
			mkh	for	Khmer, Mon-Khmer (Other)
			kon	for	Kongo
			kok	for	Konkani

ko	or	kor	for	Korean
		kos	for	Kosraean
		kpe	for	Kpelle
		kro	for	Kru
5		kua	for	Kuanyama
		kum	for	Kumyk
ku	or	kur	for	Kurdish
		kru	for	Kurukh
		kus	for	Kusaie
10		kut	for	Kutenai
		lad	for	Ladino
		lah	for	Lahnda
		lam	for	Lamba
		lan/oci	for	Langue d'oc (post 1500)
15		lao	for	Lao
	lo		for	Laothian
		lap	for	Lapp languages (Lappish)
	la	or	lat	for Latin
	lv	or	lav	for Latvian
20		ltz	for	Letzeburgesch
		lez	for	Lezghian
	ln	or	lin	for Lingala
	lt	or	lit	for Lithuania (Lithuanian)
25		nds	for	Low German
		nds	for	Low Saxon
		loz	for	Lozi
		lub	for	Luba-Katanga
		lua	for	Luba-Lulua
		lui	for	Luiseno
30		lun	for	Lunda
		luo	for	Luo (Kenya and Tanzania)
		lus	for	Lushai
	mk	or	mac/mke	for Macedonian
		mad	for	Madurese
35		mag	for	Magahi
		mai	for	Maithili
		mak	for	Makasar
	mg	or	mlg	for Malagasy

	ms	or	may/msa	for	Malay
	ml	or	mal	for	Malayalam
	mt	or	mlt	for	Maltese
			mdr	for	Mandar
5			man	for	Mandingo
			mni	for	Manipuri
			mno	for	Manobo languages
			max	for	Manx
	mi	or	mao/mri	for	Maori
10	mr	or	mar	for	Marathi
			mah	for	Marshall (Marshallese)
			mwr	for	Marwari
			mas	for	Masai
			myn	for	Mayan languages
15			men	for	Mende
			mic	for	Micmac
			min	for	Minangkabau
			i-mingo	for	Mingo
			mis	for	Miscellaneous languages
20			moh	for	Mohawk
	mo	or	mol	for	Moldavian
			mkh	for	Mon-Khmer (Other)
			lol	for	Mongo
	mn	or	mon	for	Mongolian
25			mos	for	Mossi
			mul	for	Multiple languages
			mun	for	Munda languages
	na	or	nau	for	Nauru
			nav	for	Navajo
30			i-navaho	for	Navajo
			nde	for	Ndebele (Zimbabwe)
			nde	for	Ndebele, North
			nbl	for	Ndebele, South
			ndo	for	Ndonga
35	ne	or	nep	for	Nepali
			new	for	Newari
			nai	for	Nias
			nic	for	Niger-Kordofanian (Other)

		ssa	for	Nilo-Saharan (Other)
		niu	for	Niuean
		non	for	Norse, Old
5		nai	for	North American Indian (Other)
		sme	for	Northern Sami
		nso	for	Northern Sotho
	no or	nor	for	Norwegian
		nob	for	Norwegian Bokmål
		nno	for	Norwegian Nynorsk
10		no-bok	for	Norwegian "Book Language"
		no-nyn	for	Norwegian "New Norwegian"
		nub	for	Nubian languages
		nym	for	Nyamwezi
		tog	for	Nyasa-Tonga
15		nya	for	Nyanja
		nyn	for	Nyankole
		nyo	for	Nyoro
		nzi	for	Nzima
	oc or	oci	for	Occitan
20		oji	for	Ojibwa
		non	for	Old Norse
		peo	for	Old Persian (ca. 600-400 B.C.)
	or or	ori	for	Oriya
	om or	gal/orm	for	Oromo
25		osa	for	Osage
		oss	for	Ossetic (Ossetian)
		oto	for	Otomian languages
		ota	for	Ottoman-Turkish
		pal	for	Pahlavi
30		pau	for	Palauan
		pli	for	Pali
		pam	for	Pampanga
		pag	for	Pangasinan
		pan	for	Panjabi
35		pap	for	Papiamentu
		paa	for	Papuan-Australian (Other)
	ps		for	Pashto (Pushto)
	fa or	per/fas	for	Persian (Farsi)

		peo	for	Persian, Old (ca. 600-400 B.C.)
		phi	for	Philippine (Other)
		phn	for	Phoenician
		pon	for	Pohnpeian
5	pl or	pol	for	Polish
		pon	for	Ponape
	pt or	por	for	Portuguese
		cpp	for	Portuguese-based Creoles and pidgins
		pra	for	Prakrit languages
10		oci	for	Provençal
		pro	for	Provençal, Old (to 1500)
	pa		for	Punjabi
	ps or	pus	for	Pushto (Pashto)
	qu or	que	for	Quechua
15		raj	for	Rajasthani
		rap	for	Rapanui
		rar	for	Rarotongan
		qaa-qtz	for	Reserved for local user
	rm or	roh	for	Rhaeto-Romance
20		roa	for	Romance (Other)
	ro or	ron/rum	for	Romanian
		rom	for	Romany
		run	for	Rundi
	ru or	rus	for	Russian
25	rw		for	Rwanda, Kinya
		ssa	for	Saharan, Nilo-Saharan (Other)
		sal	for	Salishan languages
		sam	for	Samaritan Aramaic
	i-sami-no		for	Sami, North (Norway)
30		smi	for	Sami languages (Other)
	sm or	sao/smo	for	Samoan
		sad	for	Sandawe
	sg or	sag	for	Sangho (Sango)
	sa or	san	for	Sanskrit
35		sat	for	Santali
		srd	for	Sardinian
		sas	for	Sasak
		nds	for	Saxon, Low

		sco	for	Scots
	gd or	gae/gdh	for	Scots Gaelic
		gla	for	Scottish Gaelic
		sel	for	Selkup
5		sem	for	Semitic (Other)
	sr		for	Serbian
		scc	for	Serbo-Croatian (Cyrillic)
	sh or	scr	for	Serbo-Croatian (Roman)
		srr	for	Serer
10	st		for	Sesotho
	tn		for	Setswana
		shn	for	Shan
	sn or	sho/sna	for	Shona
		sid	for	Sidamo
15		sgn	for	Sign languages
		bla	for	Siksika
	sd or	snd	for	Sindhi
	si or	sin	for	Singhalese
		snh	for	Sinhalese
20		sit	for	Sino-Tibetan (Other)
		sio	for	Siouan languages
	ss		for	Siswati
		den	for	Slave (Athapascan)
		chu	for	Slavic, Church
25		sla	for	Slavic (Other)
	sk or	slk/slo	for	Slovak
	sl or	slv	for	Slovenian
		sog	for	Sogdian
	so or	som	for	Somali
30		son	for	Songhai
		snk	for	Soninke
		wen	for	Sorbian languages
		nso	for	Sotho, Northern
		sot	for	Sotho, Southern
35		sso	for	Sotho
		sai	for	South American Indian (Other)
	es or	esl/spa	for	Spanish
		suk	for	Sukuma

		sux	for	Sumerian
	su or	sun	for	Sundanese
		sus	for	Susu
	sw or	swa	for	Swahili
5		ssw	for	Swati
		swz	for	Swazi
	sv or	sve/swe	for	Swedish
		syr	for	Syriac
	tl or	tag/tgl	for	Tagalog
10		tah	for	Tahitian
		tai	for	Tai (Other)
		hai	for	Taiwan (Hakka)
		i-tsu	for	Taiwan (Tsou)
	tg or	taj/tgk	for	Tajik
15		tmh	for	Tamashek
	ta or	tam	for	Tamil
	tt or	tar/tat	for	Tatar
	te or	tel	for	Telugu
		ter	for	Tereno
20		tet	for	Tetum
	th or	tha	for	Thai
	bo or	bod/tib	for	Tibetan
		sit	for	Tibetan, Sino-Tibetan (Other)
		tig	for	Tigre
25	ti or	tir	for	Tigrinya
		tem	for	Timne
		tiv	for	Tivi
		tli	for	Tlingit
		tpi	for	Tok Pisin
30		tkl	for	Tokelau
	to		for	Tonga
		tog	for	Tonga (Nyasa)
		ton	for	Tonga (Tonga Islands)
		tru	for	Truk
35		tsi	for	Tsimshian
	ts or	tso	for	Tsonga
		i-tsu	for	Tsou (Taiwan)
		tsw/tsn	for	Tswana

		tum	for	Tumbuka
	tr or	tur	for	Turkish
		ota	for	Turkish, Ottoman (1500-1928)
5	tk or	tuk	for	Turkmen
		tv1	for	Tuvalu
		tyv	for	Tuvinian
	tw or	twi	for	Twi
		uga	for	Ugaritic
		uig	for	Uighur
10	ug		for	Uigur
	uk or	ukr	for	Ukrainian
		umb	for	Umbundu
		und	for	Undetermined
	ur or	urd	for	Urdu
15	uz or	uzb	for	Uzbek
		vai	for	Vai
		ven	for	Venda
	vi or	vie	for	Vietnamese
	vo or	vol	for	Volapük (Volapük)
20		vot	for	Votic
		wak	for	Wakashan languages
		wal	for	Walamo
		war	for	Waray
		was	for	Washo
25	cy or	cym/wel	for	Welsh
	wo or	wol	for	Wolof
	xh or	xho	for	Xhosa
		sah	for	Yakut
		yao	for	Yao
30		yap	for	Yap (Yapese)
	yi or	yid	for	Yiddish
	yo or	yor	for	Yoruba
		ypk	for	Yupik languages
		znd	for	Zande
35		zap	for	Zapotec
		zen	for	Zenaga
	za or	zha	for	Zhuang
	zu or	zul	for	Zulu

zun for Zuni

Using the ISO Alpha-2 and Alpha-3 country codes as a way of assigning names to secondary eight bit data character sets, is one possible way of producing the secondary chordic combinations sets for any and all language alphabet scripts or character sets. Entry of the preferred Alpha-2 and Alpha-3 country codes exits the standard eight bit binary chordic data entry method mode, found in this patent application, and enters a secondary eight bit binary chordic data entry method mode set. Languages with extensive alphabet scripts or character sets, like Chinese, requires an eight bit binary data chord followed by an extra secondary eight bit binary data chord. Reassigning the present eight bit binary code invention arrangement, without departing from the spirit and scope of the invention as a whole, produces all language alphabet scripts or character sets.

AF	or	AFG	for	Afghanistan
AL	or	ALB	for	Albania
DZ	or	DZA	for	Algeria
AS	or	ASM	for	American Samoa
AD	or	AND	for	Andorra
AO	or	AGO	for	Angola
AI	or	AIA	for	Anguilla
AQ			for	Antartica
AG	or	ATG	for	Antigua and Barbuda
AR	or	ARG	for	Argentina
AM	or	ARM	for	Armenia
AW	or	ABW	for	Aruba
AU	or	AUS	for	Australia
AT	or	AUT	for	Austria

	AZ	or	AZE	for	Azerbaijan
	BS	or	BHS	for	Bahamas
	BH	or	BHR	for	Bahrain
	BD	or	BGD	for	Bangladesh
5	BB	or	BRB	for	Barbados
	BY	or	BLR	for	Belarus
	BE	or	BEL	for	Belgium
	BZ	or	BLZ	for	Belize
	BJ	or	BEN	for	Benin
10	BM	or	BMU	for	Bermuda
	BT	or	BTN	for	Bhutan
	BO	or	BOL	for	Bolivia
	BA	or	BIH	for	Bosnia and Herzegovina
	BW	or	BWA	for	Botswana
15	BV			for	Bouvet Island
	BR	or	BRA	for	Brazil
	IO			for	British Indian Ocean Territory
	VG	or	VGB	for	British Virgin Islands
20	BN	or	BRN	for	Brunei Darussalam
	BG	or	BGR	for	Bulgaria
	BF	or	BFA	for	Burkina Faso
	BI	or	BDI	for	Burundi
	KH	or	KHM	for	Cambodia
	CM	or	CMR	for	Cameroon
25	CA	or	CAN	for	Canada
	CV	or	CPV	for	Cape Verde
	KY	or	CYM	for	Cayman Islands
	CF	or	CAF	for	Central African Republic
	TD	or	TCD	for	Chad
30	CL	or	CHL	for	Chile
	CN	or	CHN	for	China
	HK	or	HKG	for	HongKong Special Administrative
			MAC	for	Macao Special Administrative Region of China
	CX			for	Christmas Island
35	CC			for	Cocos (Keeling) Islands
	CO	or	COL	for	Colombia
	KM	or	COM	for	Comoros
	CG	or	COG	for	Congo

CD or COD for Congo, The Democratic Republic of
 CK or COK for Cook Islands
 CR or CRI for Costa Rica
 CI or CIV for Côte d'Ivoire
 5 HR or HRV for Croatia
 CU or CUB for Cuba
 CY or CYP for Cyprus
 CZ or CZE for Czech Republic
 KP or PRK for Democratic People's Republic of Korea
 10 CD or COD for Democratic Republic of the Congo
 DK or DNK for Denmark
 DJ or DJI for Djibouti
 DM or DMA for Dominica
 DO or DOM for Dominican Republic
 15 TP or TMP for East Timor
 EC or ECU for Ecuador
 EG or EGY for Egypt
 SV or SLV for El Salvador
 GQ or GNQ for Equatorial Guinea
 20 ER or ERI for Eritrea
 EE or EST for Estonia
 ET or ETH for Ethiopia
 FO or FRO for Færoe Islands
 FK or FLK for Falkland Islands (Malvinas)
 25 FJ or FJI for Fiji
 FI or FIN for Finland
 FR or FRA for France
 GF or GUF for French Guiana
 PF or PYF for French Polynesia
 30 TF for French Southern Territories
 GA or GAB for Gabon
 GM or GMB for Gambia
 GE or GEO for Georgia
 DE or DEU for Germany
 35 GH or GHA for Ghana
 GI or GIB for Gibraltar
 GR or GRC for Greece
 GL or GRL for Greenland

	GD	or	GRD	for	Grenada
	GP	or	GLP	for	Guadeloupe
	GU	or	GUM	for	Guam
	GT	or	GTM	for	Guatemala
5	GN	or	GIN	for	Guinea
	GW	or	GNB	for	Guinea-Bissau
	GY	or	GUY	for	Guyana
	HT	or	HTI	for	Haiti
	HM			for	Heard Island and McDonald Islands
10	VA	or	VAT	for	Holy See (see Vatican City State)
	HN	or	HND	for	Honduras
	HK	or	HKG	for	Hong Kong
	HU	or	HUN	for	Hungary
	IS	or	ISL	for	Iceland
15	IN	or	IND	for	India
	ID	or	IDN	for	Indonesia
	IR	or	IRN	for	Iran (Islamic Republic of)
	IQ	or	IRQ	for	Iraq
	IE	or	IRL	for	Ireland
20	IL	or	ISR	for	Israel
	IT	or	ITA	for	Italy
	JM	or	JAM	for	Jamaica
	JP	or	JPN	for	Japan
	JO	or	JOr	for	Jordan
25	KZ	or	KAZ	for	Kazakhstan
	KE	or	KEN	for	Kenya
	KI	or	KIR	for	Kiribati
	KP	or	PRK	for	Korea, Democratic People's Republic of
	KR	or	KOr	for	Korea, Republic of
30	KW	or	KWT	for	Kuwait
	KG	or	KGZ	for	Kyrgyzstan
	LA	or	LAO	for	Lao People's Democratic Republic
	LV	or	LVA	for	Latvia
	LB	or	LBN	for	Lebanon
35	LS	or	LSO	for	Lesotho
	LR	or	LBR	for	Liberia
	LY	or	LBY	for	Libyan Arab Jamahiriya
	LI	or	LIE	for	Liechtenstein

	LT	or	LTU	for	Lithuania
	LU	or	LUX	for	Luxembourg
	MO			for	Macau
5	MK	or	MKD	for	Macedonia, The former Yugoslav Republic of
	MG	or	MDG	for	Madagascar
	MW	or	MWI	for	Malawi
	MY	or	MYS	for	Malaysia
	MV	or	MDV	for	Maldives
	ML	or	MLI	for	Mali
10	MT	or	MLT	for	Malta
	MH	or	MHL	for	Marshall Islands
	MQ	or	MTQ	for	Martinique
	MR	or	MRT	for	Mauritania
	MU	or	MUS	for	Mauritius
15	YT			for	Mayotte
	MX	or	MEX	for	Mexico
	FM	or	FSM	for	Micronesia, Federated States of
	MD	or	MDA	for	Moldova, Republic of
20	MC	or	MCO	for	Monaco
	MN	or	MNG	for	Mongolia
	MS	or	MSR	for	Montserrat
	MA	or	MAR	for	Morocco
	MZ	or	MOZ	for	Mozambique
25	MM	or	MMR	for	Myanmar
	NA	or	NAM	for	Namibia
	NR	or	NRU	for	Nauru
	NP	or	NPL	for	Nepal
	NL	or	NLD	for	Netherlands
30	AN	or	ANT	for	Netherlands Antilles
	NC	or	NCL	for	New Caledonia
	NZ	or	NZL	for	New Zealand
	NI	or	NIC	for	Nicaragua
	NE	or	NER	for	Niger
	NG	or	NGA	for	Nigeria
35	NU	or	NIU	for	Niue
	NF	or	NFK	for	Norfolk Island
	MP	or	MNP	for	Northern Mariana Islands
	NO	or	NOr	for	Norway

	OM	or	OMN	for	Oman
	PK	or	PAK	for	Pakistan
	PW	or	PLW	for	Palau
	PS	or	PSE	for	Palestinian Occupied Territory
5	PA	or	PAN	for	Panama
	PG	or	PNG	for	Papua New Guinea
	PY	or	PRY	for	Paraguay
	PE	or	PER	for	Peru
	PH	or	PHL	for	Philippines
10	PN	or	PCN	for	Pitcairn
	PL	or	POL	for	Poland
	PT	or	PRT	for	Portugal
	PR	or	PRI	for	Puerto Rico
	QA	or	QAT	for	Qatar
15	KR	or	KOR	for	Republic of Korea
	MD	or	MDA	for	Republic of Moldova
	RE	or	REU	for	Réunion
	RO	or	ROM	for	Romania
	RU	or	RUS	for	Russian Federation
20	RW	or	RWA	for	Rwanda
	SH	or	SHN	for	Saint Helena
	KN	or	KNA	for	Saint Kitts and Nevis
	LC	or	LCA	for	Saint Lucia
	PM	or	SPM	for	Saint Pierre and Miquelon
25	VC	or	VCT	for	Saint Vincent and the Grenadines
	WS	or	WSM	for	Samoa
	SM	or	SMR	for	San Marino
	ST	or	STP	for	Sao Tome and Principe
	SA	or	SAU	for	Saudi Arabia
30	SN	or	SEN	for	Senegal
	SC	or	SYC	for	Seychelles
	SL	or	SLE	for	Sierra Leone
	SG	or	SGP	for	Singapore
	SK	or	SVK	for	Slovakia
35	SI	or	SVN	for	Slovenia
	SB	or	SLB	for	Solomon Islands
	SO	or	SOM	for	Somalia
	ZA	or	ZAF	for	South Africa

GS for South Georgia & the South Sandwich Islands
 ES or ESP for Spain
 LK or LKA for Sri Lanka
 SD or SDN for Sudan
 5 SR or SUR for Suriname
 SJ or SJM for Svalbard and Jan Mayen Islands
 SZ or SWZ for Swaziland
 SE or SWE for Sweden
 CH or CHE for Switzerland
 10 SY or SYR for Syrian Arab Republic
 TW or TWN for Taiwan, Province of China
 TJ or TJK for Tajikistan
 TZ or TZA for Tanzania, United Republic of
 TH or THA for Thailand
 15 MK or MKD for The former Yugoslav Republic of Macedonia
 TG or TGO for Togo
 TK or TKL for Tokelau
 TO or TON for Tonga
 TT or TTO for Trinidad and Tobago
 20 TN or TUN for Tunisia
 TR or TUR for Turkey
 TM or TKM for Turkmenistan
 TC or TCA for Turks and Caicos Islands
 TV or TUV for Tuvalu
 25 UG or UGA for Uganda
 UA or UKR for Ukraine
 AE or ARE for United Arab Emirates
 GB or GBR for United Kingdom
 TZ or TZA for United Republic of Tanzania
 30 US or USA for United States
 UM for United States Minor Outlying Islands
 VI or VIR for United States Virgin Islands
 UY or URY for Uruguay
 UZ or UZB for Uzbekistan
 35 VU or VUT for Vanuatu
 VA or VAT for Vatican City State (see Holy See)
 VE or VEN for Venezuela
 VN or VNM for Viet Nam

VG or VGB for Virgin Islands, British
 VI or VIR for Virgin Islands, U.S.
 WF or WLF for Wallis and Futuna Islands
 EH or ESH for Western Sahara
 YE or YEM for Yemen
 YU or YUG for Yugoslavia
 CG or COG for Zaire (The Democratic Republic of Congo)
 ZM or ZMB for Zambia
 ZW or ZWE for Zimbabwe

Using the country's area code as a way of assigning names to secondary eight bit data character sets, is one possible way of producing the secondary chordic combinations sets for any and all language alphabet scripts or character sets. Entry of the preferred country area codes exits the standard eight bit binary chordic data entry method mode, found in this patent application, and enters a secondary eight bit binary chordic data entry method mode set. Languages with extensive alphabet scripts or character sets, like Chinese, requires an eight bit binary data chord followed by an extra secondary eight bit binary data chord. Reassigning the present eight bit binary code invention arrangement, without departing from the spirit and scope of the invention as a whole, produces all language alphabet scripts or character sets.

93 for Afghanistan
 355 for Albania
 213 for Algeria
 684 for American Samoa
 376 for Andorra
 244 for Angola
 54 for Argentina

	374	for	Armenia
	297	for	Aruba
	247	for	Ascension
	61	for	Australia
5	672	for	Australian Ext. Terr.
	43	for	Austria
	994	for	Azerbaijan
	973	for	Bahrain
	880	for	Bangladesh
10	375	for	Belarus
	32	for	Belgium
	501	for	Belize
	229	for	Benin
	975	for	Bhutan
15	591	for	Bolivia
	387	for	Bosnia - Herzegovina
	267	for	Botswana
	55	for	Brazil
	673	for	Brunei Darussalam
20	359	for	Bulgaria
	226	for	Burkina Faso
	257	for	Burundi
	855	for	Cambodia
	237	for	Cameroon
25	238	for	Cape Verde
	236	for	Central African Rep.
	235	for	Chad
	56	for	Chile
	86	for	China (People's Rep.)
30	57	for	Colombia
	269	for	Comoros Is.
	242	for	Congo
	682	for	Cook Islands
	506	for	Costa Rica
35	385	for	Croatia
	53	for	Cuba
	357	for	Cyprus
	420	for	Czech Republic

	45	for	Denmark
	246	for	Diego Garcia
	253	for	Djibouti
	670	for	East Timor
5	593	for	Ecuador
	20	for	Egypt
	503	for	El Salvador
	291	for	Eritrea
	372	for	Estonia
10	251	for	Ethiopia
	240	for	Equatorial Guinea
	691	for	F.S. Micronesia
	298	for	Færoe Islands
	500	for	Falkland Islands
15	679	for	Fiji
	358	for	Finland
	33	for	France
	689	for	French Polynesia
	241	for	Gabon
20	220	for	Gambia
	995	for	Georgia (Republic of)
	49	for	Germany
	233	for	Ghana
	350	for	Gibraltar
25	30	for	Greece
	299	for	Greenland
	590	for	Guadeloupe
	502	for	Guatemala
	594	for	Guiana (French)
30	224	for	Guinea
	245	for	Guinea-Bissau
	592	for	Guyana
	509	for	Haiti
	504	for	Honduras
35	852	for	Hong Kong
	36	for	Hungary
	354	for	Iceland
	91	for	India

	62	for	Indonesia
	98	for	Iran
	964	for	Iraq
	353	for	Ireland
5	972	for	Israel
	39	for	Italy
	225	for	Ivory Coast
	81	for	Japan
	962	for	Jordan
10	997	for	Kazakhstan
	254	for	Kenya
	686	for	Kiribati
	850	for	Korea (North)
	82	for	Korea (South)
15	965	for	Kuwait
	996	for	Kyrgyz Republic
	856	for	Laos
	371	for	Latvia
	961	for	Lebanon
20	266	for	Lesotho
	231	for	Liberia
	218	for	Libya
	423	for	Liechtenstein
	370	for	Lithuania
25	352	for	Luxembourg
	853	for	Macau
	389	for	Macedonia (FYR)
	261	for	Madagascar
	265	for	Malawi
30	60	for	Malaysia
	960	for	Maldives
	223	for	Mali
	356	for	Malta
	692	for	Marshall Islands
35	596	for	Martinique
	222	for	Mauritania
	230	for	Mauritius
	269	for	Mayotte (Comoros Is.)

	52	for	Mexico
	691	for	Micronesia
	373	for	Moldova
	377	for	Monaco
5	976	for	Mongolia
	212	for	Morocco
	258	for	Mozambique
	95	for	Myanmar (Burma)
	264	for	Namibia
10	674	for	Nauru
	977	for	Nepal
	31	for	Netherlands
	599	for	Netherlands Antilles
	687	for	New Caledonia
15	64	for	New Zealand
	505	for	Nicaragua
	227	for	Niger
	234	for	Nigeria
	683	for	Niue
20	1	for	North America
	47	for	Norway
	968	for	Oman
	92	for	Pakistan
	680	for	Palau
25	970	for	Palestine
	507	for	Panama
	675	for	Papua New Guinea
	595	for	Paraguay
	51	for	Peru
30	63	for	Philippines
	48	for	Poland
	351	for	Portugal
	974	for	Qatar
	262	for	Reunion Island
35	40	for	Romania
	7	for	Russia (Kazakhstan)
	250	for	Rwanda
	290	for	Saint Helena

	378	for	San Marino
	239	for	São Tomé & Príncipe
	881	for	Satellite services
	966	for	Saudi Arabia
5	221	for	Senegal
	248	for	Seychelles
	232	for	Sierra Leone
	65	for	Singapore
	421	for	Slovakia
10	386	for	Slovenia
	677	for	Solomon Islands
	252	for	Somalia
	27	for	South Africa
	34	for	Spain
15	94	for	Sri Lanka
	508	for	St. Pierre & Miquélon
	249	for	Sudan
	597	for	Suriname
	268	for	Swaziland
20	46	for	Sweden
	41	for	Switzerland (Liecht.)
	963	for	Syria
	886	for	Taiwan (reserved)
	992	for	Tajikistan
25	255	for	Tanzania
	66	for	Thailand
	228	for	Togo
	690	for	Tokelau
	676	for	Tonga
30	216	for	Tunisia
	90	for	Turkey
	993	for	Turkmenistan
	688	for	Tuvalu
	256	for	Uganda
35	380	for	Ukraine
	851	for	unassigned
	971	for	United Arab Emirates
	44	for	United Kingdom

998 for Uzbekistan
 678 for Vanuatu
 379 for Vatican City
 58 for Venezuela
 84 for Viet Nam
 681 for Wallis and Futuna
 685 for Western Samoa
 967 for Yemen
 381 for Yugoslavia
 243 for Zaire
 260 for Zambia
 263 for Zimbabwe

It is possible to choose a variety of scripts and data entry choices such as Latin based language alphabets, multinational languages, any and all foreign languages with less than 65,025 (255×255) characters in the language, font set, monetary symbols set, phonetic symbols set, typographic symbols set, iconic symbols set, math symbols set, scientific symbols set, box drawing symbols set, graphics, macros, etc. Exiting a mode or any modes can be achieved by using the "shift out" (#175) function.

The eight bit binary code can also be used as a finger braille type of communication by the deaf-blind, where the transmitter transmits (Finger Braille) the mirror imaged binary data chord from the left hand onto the right hand and the mirror imaged binary data chord from the right hand onto the mirror imaged left hand, so the receiver receives (Fingers) the binary data in its preferred embodiment. This physiological aspect of this method is that the transmitter

already knows what they are going to transmit, so they simply switch the four digit binary chords on either hand so that the receiver has more time to easily process the binary data into words and other types of communication. If an individual is

5 missing a thumb digit, the system can be implemented by using the index, middle, ring and little (pinkie) digit of the left and right hands. When used as a form of binary braille finger spelling for the deaf-blind, two individuals face each other, and place their hands in the following touching arrangement:

10 transmitters left hand to receivers right hand and transmitters right hand to receivers left hand, thumb to thumb, digit to digit, etc. When transmitting data, the transmitter transmits binary hand chords from the preferred left hand group to the right hand group and from the preferred right hand group to the left hand group. For example, when

15 transmitting the lower-case letter "b" (#40) chord (0001 0100), the transmitter transmits the mirror image binary chord for the upper-case vowel "E" (#20) (0010 1000). The receiver will then receive the lower case letter "b". The technique for

20 producing vowel and consonant chords to communicate to a deaf-blind individual is explained in the Finger Braille tables found in FIGS. 1A-1P. An easier to learn arrangement is explained in the Finger Braille tables found in FIGS. 3A-3L.

The system and method of the invention is logically

25 developed and implemented so that it is easy to learn and quick to use, especially for those who are handicapped or

sight impaired.

These and other features of the present invention will be more fully understood by referencing the drawings.

5 The system and method can use a variety of different keyboards, including some that are already on the market. For example, the split space bar QWERTY keyboard needs only to be reprogrammed. Additional instructions can be entered by the keyboard system and method according to the preferred embodiment which are consistent with instructions that also
10 can be produced with the QWERTY keyboard, Dvorak keyboard, or other types of Latin based alphabet foreign language keyboards such as the Spanish, French, German, Italian, Swedish/Finnish, Canadian bilingual along with many other types of Latin based alphabet keyboards known to those of ordinary skill in the
15 art, as long as they have as split space bar or a way of using at least eight keys or sensors to enter data. Other known keyboards and data entry devices can also be employed for the same purpose of entering information into a word processor or computer, such as typewriters, braille writers, word
20 processors, phones, computers systems, laptops, keyboards, touch screen input devices, PDAs, cell phones, virtual keyboards and the like.

25 The most convenient way to employ the improved keyboard system is to provide an interface or software which translates the eight digit binary code into a standard computer code such

as ASCII, extended ASCII or EBCDIC, which a conventional computer will be able to recognize. This can be done external to the computer through a hardwired interface, internal to the computer through an electronic interpreter or through a software program using the translation instructions found in FIGS. 1A-1P using source code programming techniques that are very well known to those of ordinary skill in the art.

In summary, the virtual keyboard invention, using an eight bit binary code data entry system and method, according to the preferred embodiment and alternative embodiments of the invention, is relatively easy to learn and very easy to use, especially by handicapped and visually impaired individuals. The vowels, consonants, numbers, etc. are produced in a unique and logical way that makes them easy to learn and remember, and also quick to implement. Other features and functions of the invention achieve the same result.

While the invention has been described with reference to the preferred embodiment thereof, it will be appreciated by those of ordinary skill in the art that various modifications can be made to the system and method of the invention without departing from the spirit and scope of the invention as a whole.

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